Artemisia tridentata ssp. wyomingensis / Pascopyrum smithii Shrubland

COMMON NAME	Wyoming Big Sagebrush / Western Wheatgrass Shrubland
SYNONYM	Big Sagebrush / Western Wheatgrass Shrubland
PHYSIOGNOMIC CLASS	Shrubland (III)
PHYSIOGNOMIC SUBCLASS	Evergreen shrubland (III.A)
PHYSIOGNOMIC GROUP	Microphyllous evergreen shrubland (III.A.4)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (III.A.4.N)
FORMATION	Microphyllous evergreen shrubland (III.A.4.N.a)
ALLIANCE	ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM

RANGE

Theodore Roosevelt National Park

Wyoming Big Sagebrush / Western Wheatgrass Shrublands are widely but sporadically distributed throughout Theodore Roosevelt National Park. Typically, these shrublands are found on the nearly level benches associated with the Badlands Sparse Vegetation Complex and on the rounded tops of small buttes.

Globally

This type is found throughout the northern Great Plains.

ENVIRONMENTAL DESCRIPTION

Theodore Roosevelt National Park

Stands typically occur on nearly level sites with moderately deep clay, clay loam, and silt loam soils. On south and west facing slopes, the stands are found below steep badlands slopes. Under these conditions, the sites probably receive supplemental moisture in the form of runoff from the adjacent slopes. North and east facing slopes tend to be more mesic and community development is not dependent upon runoff from adjacent slopes.

Globally

Stands occur on gently rolling uplands or upper parts of stream terraces and drainageways. Drier examples may be on more exposed slope positions. Soils are moderately deep clays, clay loam, silt loam and loam. Soil moisture conditions are relatively mesic. Soil pH ranges from 5.8 to 7.8 (Hirsch 1985, Hansen and Hoffman 1988, Thilenius et al. 1995).

MOST ABUNDANT SPECIES

Theodore Roosevelt National Park

Stratum	Species
Shrub	*Artemisia tridentata, Atriplex confertifolia, Chrysothamnus nauseosus*
Herbaceous	*Pascopyrum smithii,, Stipa comata, Bouteloua gracilis*

Globally

CHARACTERISTIC SPECIES

Theodore Roosevelt National Park

Artemisia tridentata, Pascopyrum smithii

Globally

VEGETATION DESCRIPTION

Theodore Roosevelt National Park

The shrubs are relatively wide-spaced, less than 0.5 m in height, and usually produce just slightly over 25% foliar cover. Composition of the shrubs consists of *Artemisia tridentata, Atriplex confertifolia, Chrysothamnus nauseosus,* and *Gutierezzia sarothrae.* Foliar cover of the herbaceous is often relatively high. The primary herbaceous species is *Pascopyrum smithii* with *Stipa comata, Bouteloua gracilis,* and *Koeleria macrantha* as the usual secondary species.

Globally

The vegetation contains an open short shrub layer, approximately 0.5 m tall, dominated by microphyllous-leaved shrubs, and a dense herbaceous layer dominated by medium-tall graminoids. Shrub cover averages between 15 and 30% (Hirsch 1985, Hansen and Hoffman 1988, Thilenius et al. 1995). *Artemisia tridentata ssp. wyomingensis* dominates the shrub layer. The dense herbaceous

layer has a canopy cover of over 75%. *Pascopyrum smithii* is the leading dominant. Important associates include *Koeleria macrantha, Poa secunda, and Stipa viridula*. In drier or more heavily grazed phases, *Bouteloua gracilis, Stipa comata*, and *Carex filifolia* may be more common, along with the succulent *Opuntia polyacantha*. Forbs contribute low cover, often less than 10%, and are typically of low constancy. More constant species (>50%) include *Artemisia frigida, Sphaeralcea coccinea*, and *Vicia americana*. Grassy leaf litter cover over 75% of the ground; stones and bare soil comprise the remainder. Non-vascular plants are rare (Hirsch 1985, Hansen and Hoffman 1988, Thilenius et al. 1995).

CONSERVATION RANK G4.

DATABASE CODE CEGL001047

COMMENTS
Artemisia tridentata ssp. *wyomingensis* can vary in height from 0.1 m to over 1 m in height.

REFERENCES